



TECHNICIAN TIMES

Volume 5 Issue 2

2002

Top Kia Techs Take On The World

Think you know your way around a Sportage? Is every nut and bolt on a Sedona a personal friend? How about the Sorento? Well these guys do.



Introducing left to right, **Jeffrey Jacobs** of Delray Kia-FL032, Delray Beach, Florida, **Frank Rosing** of Southlake Kia-IN002, Merrillville, Indiana, **Ken Sessom** of Mitchell Kia-TX014, San Angelo, Texas, and **Jim Schofield** of Cowboy Corral Kia-CO16, Longmont, Colorado. These men have all achieved their ASE Master and ASE L1 certifications and performed very well on the Skill WorldCup test. They are the best of the best when it comes to turning wrenches. And to prove it, they're going to the Chon-An Training Center in Korea from April 22-26 to represent the USA in the 1st Kia Skill WorldCup 2002.

A solid week of intensive training at the corporate offices in Irvine, California, along with thousands of hours in the service bays have prepared them to take on the world. And that's just who they compete against when they go head-to-head with Kia's top techs from around the globe. The top prize is a gold plaque and \$3,000 in cold, hard cash.

My main goal is to change people's perceptions of just what a technician does," said Sessom. "We are more than just grease monkeys." Maybe, but Jacobs has other plans. "I want to take home the gold," he said. "And a bunch of money wouldn't hurt either."

Rosing and Schofield kept quiet. In fact, it was difficult to get any of them to chit-chat for very long. They were all too focused on repairing the hunk of metal sitting before them. In better days, it had been a transmission. Not surprisingly, they all looked very confident that it could be fixed.

"Good luck in Korea gentlemen."



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2nd Quarter 2002 KU Masters Online Tests Are Ready for the Taking!

Kia University is pleased to announce the release of the 2nd Quarter 2002 certification tests for all dealership personnel. As you know, completion of the quarterly tests is required for certification under the Kia Masters Program.

The tests are based on information from two primary sources:

1. Information mailed to Kia dealerships during the 1st Quarter 2002 (if you no longer have the paper copies, this information is now available at www.kdealer.net)
2. Specific online course modules available at www.kiauniversity.com

For the 2nd quarter, different online modules will be tested to based on job title. Test is based on information related to your specific job description. See your manager for further details. Please refer to the list below to see what modules should be reviewed:

- GM/Dealer Principal - The Growing Impact of the Internet and Using the Internet as a Sales Tool
- Sales Manager - Building a Successful Sales Team and Creating a Positive Sales Environment
- Sales Consultant - Building Value Through Delivery and Putting Customers First
- Receptionist/Porter - Putting Customers First
- Service Manager - Building Customer Loyalty and Making the Service Environment Inviting
- Service Advisor - Fixing It Right The First Time and Demonstrating Knowledge and Expertise
- Warranty Administrator - Success In The Service Lane
- Cashier - Positive Service Consultation and Vehicle Pickup
- Parts Manager and Parts Counterperson - Online modules not required

Registration Reminder: 1) If you haven't registered, see your dealership business manager to obtain your kdealer.net dealership user name and password. 2) Once at kdealer.net, click on the KU logo to register at kiauniversity.com. 3) Take courses when it's convenient, anytime, anywhere – 24/7.

Take your 2nd Quarter 2002 tests now! Get online, get tested and Kia Masters Certified.

Reman A/T Fluid Specs. Change

The automatic transmission fluid specification has changed to Kia SP III ATF for all older Sephia vehicles and all remanufactured automatic transmissions.

See chart below for all Kia vehicle ATF application information:

Model	Fluid Specs.
Front Wheel Drive Sephia, Spectra, Rio, Optima, Sedona	Kia SP III
Rear Wheel Drive Sportage	Dexron III

* NOTICE

All remanufactured automatic transmissions now use Kia SP III ATF. If an older vehicle with a reman needs service that requires draining the ATF, refill with SP III.

Remote Keyless Entry

When diagnosing complaints for inoperative or intermittent remote keyless entry (RKE) system, it is important to check the transmitter first. This consists of measuring the voltage of the transmitter battery, as well as inspecting/cleaning the battery contacts (see chart). If these checks are done first, it may help to reduce unnecessary RKE repairs.

Transmitter	Voltage Spec
Sephia, Spectra, Sportage (Code Alarm)	12V
Optima (OEM)	3V
Sedona (OEM)	3V each (2 batteries)

DTC Input Requested for Warranty Processing

One of the many recent upgrades to the Warranty Administration System is a separate field in the warranty claim screen to record the primary DTC involved in a repair. This DTC data on the claims will enable KMA and KMC to develop countermeasures more quickly than before.

To ensure maximum effectiveness of this new upgrade and to allow proper warranty claim processing, please make sure to select and identify the one DTC that identifies the primary concern on the vehicle being repaired and record it on the R.O.

As always, also remember to write down the accompanying Freeze Frame Data on the R.O. as well.

WARNING

- **VEHICLE SERVICING PERFORMED BY UNTRAINED PERSONS COULD RESULT IN INJURY TO THOSE PERSONS OR TO OTHERS.**
- **THE KIA TECHNICIAN NEWSLETTER (KIA TECHNICIAN TIMES) IS INTENDED FOR USE BY PROFESSIONAL KIA AUTOMOTIVE TECHNICIANS ONLY. IT IS WRITTEN TO INFORM TECHNICIANS OF CONDITIONS THAT MAY OCCUR ON SOME VEHICLES. TRAINED KIA TECHNICIANS HAVE THE EQUIPMENT, TOOLS, SAFETY INSTRUCTIONS, PUBLICATIONS AND EXPERTISE TO PERFORM THE JOB CORRECTLY AND SAFELY.**

This Newsletter is to be distributed to Kia dealership personnel only. It is not, under any circumstances, to be given to customers or other non-Kia dealership personnel for any reason.

CAUTION

VEHICLE SERVICING PERFORMED BY UNTRAINED PERSONS COULD RESULT IN DAMAGE TO THE VEHICLE.

* NOTICE

- *The topics covered in this newsletter are designed to assist you with the diagnosis and repair of specific vehicle conditions. Just because a condition is described in this newsletter, do not assume that it applies to your vehicle, or that your vehicle will have that condition.*
- *In all cases, the procedures in the applicable Service Manual and/or Electrical Troubleshooting Manual should be performed first.*

TSB Update

TSBs issued in February and March 2002:

- **Climate Control 006**, Rear HVAC Blend Air Door
- **Transmission/Driveline 003 (Revised)**, Sephia/Spectra Remanufactured Automatic Transmission Program
- **Transmission/Driveline 008**, Automatic Transaxle Diagnosis for Sephia/Spectra/Rio

Sportage Rear Window Regulator Update

Beginning 3/11/02, an improved regulator has been put into production. The armature end piece has changed from a nylon button to a steel ball. To aid in identifying the improved regulator, the part number has been changed (see chart).

	Old P/N	New P/N
LH	0K077 73 560A	0K077 73 560B
RH	0K077 72 560A	0K077 72 560B
Starting Lot #	--	2C11 →

Sportage Silencer Design Change

From 10/5/01 production, the main body of the Sportage silencer (muffler) has been changed from rolled to stamped construction. There is no interchangeability between the new and previous parts.



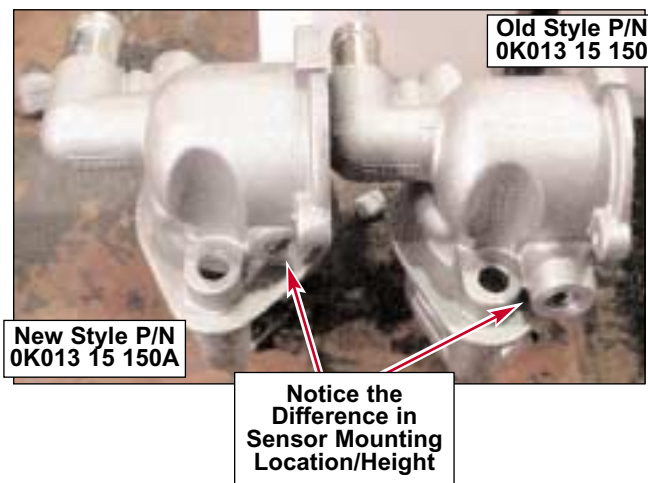
Old Style Silencer Assembly
P/N: 0K07A 40 100



New Style Silencer Assembly
Effective Production Date 10/5/01
P/N: 0K07B 40 100A

Sportage Thermostat Housing

Starting with 6/17/00 production the engine thermostat housing on Sportage was changed from P/N: 0K013 15 150 to P/N: 0K013 15 150A. Note that ITC is "C" and that the change occurred at the same time the thermostat was changed in preparation for thermostat monitoring. The thermostat monitoring function was introduced on 9/18/00 (4dr) and 10/2/00 (2dr).



Note the difference in sensor mounting boss (height) between the old and the new parts. The new thermostat housing causes the tip of the ECT sensor to protrude further into the coolant flow, resulting in a more responsive and more accurate temperature reading.

Do not use the old style thermostat housing on Sportages built after 9/18/00 as under certain circumstances the ECM may inadvertently set a DTC P0128 (thermostat malfunction) due to perceived slower temperature changes.

2002 Spectra ECM Data

As you may have noticed, the data stream on the '02 Spectra has a few changes from what we were used to seeing on earlier models. The ECM was changed in '02 from a Motronic 4.6 to a Motronic 7.9 system. The new system has a few new parameters but also interprets some of the common parameters differently. Some examples are:

- TPS at closed throttle now shows 0% instead of the 9% - 12% we used to see (when in doubt use TPS voltage parameter).
- Inhibitor switch now shows off in park and neutral, on when in gear (starting inhibited), the old system showed the opposite.
- ISC opening and closing and evaporative purge solenoid are shown in percentage instead of milliseconds.
- ECT voltage reads lower at the same temperature.

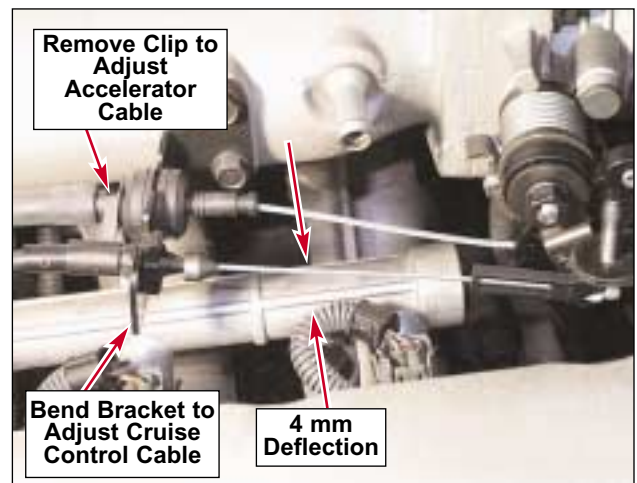
In addition, other components were changed at the same time as the ECM causing some data to change:

- IAT temperature reads slightly lower at the same ambient temperature, due to the integration of the IAT sensor into the MAF sensor.
- MAF voltages have changed but read the same grams per second. The new system also turns on the fuel pump for about two seconds at key on to aid start up.

Bottom line is that if you are diagnosing a 2002 Spectra, please don't replace parts because of unusual readings; first take into account the changes mentioned above.

2002 Spectra P0121 Code

When servicing a 2002 Spectra with a P0121 code (TP Sensor Circuit Range/Performance Problem), make sure the cruise control cable is properly adjusted. Even though no other drivability symptoms exist, the cruise control cable bracket that bolts to the intake manifold may have been bent during other servicing making the cable too tight. To adjust the cruise control cable, bend the bracket towards the throttle body until you get approximately 4 mm cable deflection. After adjusting the cruise control cable, check the accelerator cable deflection and adjust if necessary to 4-7 mm by removing the clip at the cable retainer and moving the cable casing in or out of the retainer.



Spectra Engine/Condenser Fan Control

From 11/1/01 production, Spectra uses a two speed fan control.

The condenser fan now has a second relay controlled by the ECM. The previously used AC dual pressure switch has been replaced by a "triple pressure" version.

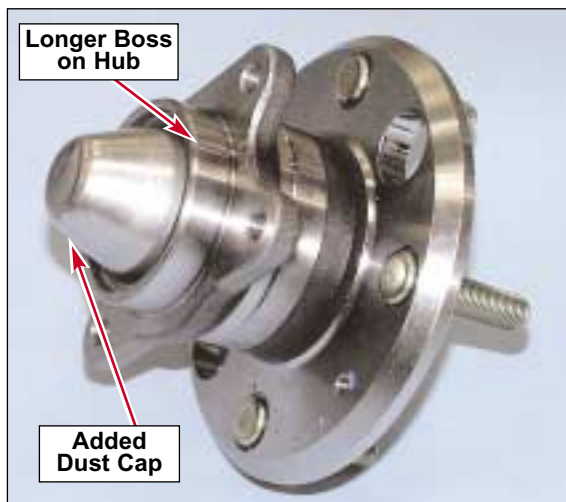
Due to these changes, several wire harnesses and the engine compartment fuse and relay box have been changed. Watch for updated information in future Spectra Service documentation. For immediate assistance, contact Kia's Techline at 1-800-494-4542.

Optima Rear Hub & Bearing Assembly (Non ABS)

To prevent bearing contamination from outside elements, the non-ABS rear hub and bearing assembly has been improved as of 5/3/01 production. The new hub has a longer boss where the assembly bolts to the rear axle carrier and a dust cap has been added as a secondary seal. Despite the visual differences, the new assembly is a direct replacement for the old assembly.



Old Hub and Bearing Assembly



New Hub and Bearing Assembly

2001 Optima 4 Cylinder DTC P0128

Under certain cold weather operating conditions, 2001MY 4-cylinder Optima may set a DTC P0128 (thermostat malfunction), even though no driveability concerns exist, the thermostat is operating properly, and a normal operating temperature is reached without noticeable delay.

2001MY 4-cylinder Optima P0128 logic uses a temperature threshold of 82°C (179.6°F). This threshold must be reached within a certain time after start-up, or the ECM will consider the thermostat inoperative/stuck open. Note that time after start-up in this case is actually a function of mass air flow. For more details and additional parameters, refer to the Hi-Scan Pro with the P0128 DTC displayed on screen, then hit the "help" button and select "tips".

For 2002MY 4-cylinder Optima, the DTC P0128 logic temperature threshold was reduced to 75°C (167°F) to reduce incidence of P0128 code. It is suspected that in certain ambient temperature operating conditions, the higher threshold in 2001 MY causes the DTC to be stored even though the thermostat did not fail.

A P0128 logic software fix is being developed for 2001MY vehicles. The fix should be available in May, and will be downloadable to the ECM through Hi-Scan Pro. A TSB will be issued.

New ABS System For Optima

Starting with 12/12/01 production, the ABS system on (V6 equipped) Optimas is supplied by Bosch. The new system replaces the previous Teves Mk-20i version.



Although new for Optima, the system known as "Bosch 5.3" has been widely used throughout the industry. Bosch 5.3 ABS comes equipped with Electronic Brake force Distribution (EBD) and can be expanded in the future to include a Traction Control System (TCS). Self-diagnosis capabilities are built in, and fault codes will be retrievable using the Hi-Scan Pro. Watch for additional information in future Optima Service documentation. Should you encounter a problem in a Bosch 5.3 ABS equipped Optima before the updated documentation is published, contact Kia's Technical Assistance Hotline at 1-800-494-4542 for additional information.

Brake Upgrade TSB for 4 Cyl Optima Delayed

In Kia *Technician Times*, Vol 4, Issue 6, we informed you about the change in the rear brake shoes and backing plate for Optimas equipped with rear drum brakes. Although the change went into effect on 11/1/01, KMA has not been able to release the TSB due to temporary unavailability of the new brake shoes. Efforts are underway to resolve this situation as soon as possible.

Sedona PVC Valve & Cylinder Head Cover

A change has been made to the PCV valve and cylinder head cover on the '02 Sedona for improved crankcase sealing. From June 2001, the PCV valve was changed from a push-in rubber grommet type to a threaded type.

The part number for the new (threaded) PCV valve is 26740 32804. The next edition of the Sedona Parts Catalog should reflect this change and have the part number for the threaded cylinder head cover.



Old PCV Valve



New PCV Valve

Sedona Double Hinged Seat

From 2/15/02 production the Sedona 2nd and 3rd row seats have a double hinge mechanism for folding the seat back. To fold the seat back all the way flat, pull up on seat back adjustment lever to partially fold seat, then push forward on the secondary release knob to fold seat back flat. To return seat back to upright position, lift seat back until secondary mechanism latches, then lift seat back adjustment lever and adjust to desired position.



Sedona ACU Change

During a 5 mph bumper procedure recently conducted by the Insurance Institute for Highway Safety (IIHS), an organization funded by insurance companies, the airbags in the Sedona deployed, causing the alleged repair costs for the Sedona to increase.

Kia engineers concluded that the deployment was unique to the IIHS procedure, and does not reflect what happens in real world collisions.

However, to eliminate the possibility that a deployment would occur the next time IIHS conducted its procedure and to protect Kia from resulting negative PR (re: repair costs), a production running change was made in the ACU logic from 2/20/02. Sedona owners have been told about this change.

For owners of Sedonas produced before the ACU logic change, who also request that their vehicle's ACU be changed, a reprogramming card will be available soon. A TSB will be issued.

Sedona Spark Plug Interval Update

2002 Owners Manual for Sedona incorrectly shows three different types of spark plugs, as well as two different service intervals. Incorrect service intervals are also shown in the Fixed Operations Information Guide or FOIG.

The only correct service interval for the (platinum) spark plugs used for USA market Sedona is 60,000 miles. For correct part number information see the current Sedona Parts Catalog.

Sedona Roof Rack Installation

When installing a Sedona roof rack or any Kia approved roof rack, it is very important to use only the hardware that comes with the kit. Do not substitute components or hardware. The roof rack is rated for a maximum load capacity and by substituting components or hardware, the load capacity of the roof rack may be compromised.

The Sedona roof rack footings are affixed to the vehicle's roof by steel rivet nuts supplied with the kit. Without the proper installation tool, the steel rivet nuts are very difficult to compress/install. Please use or acquire appropriate rivet nut installation tool (manual or pneumatic) when installing a roof rack. Contact a tool distributor in your area if needed.

2000 & Later Sephia/Spectra Evap Testing

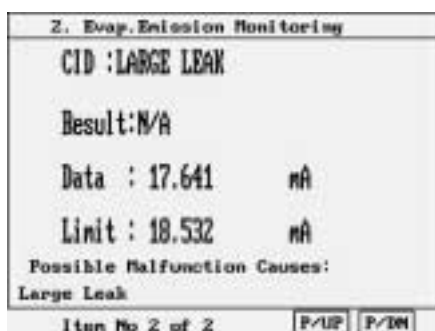
When testing evap. leaks on DM-TL (Diagnostic Module-Tank Leakage) systems, the hardest part may be determining if the DM-TL itself is leaking or another part of the system. After performing a visual inspection and running an evaporative leakage test with the Hi-Scan Pro, if a small or large leak code resets you may want to test the DM-TL by itself. The best way to check the DM-TL is to isolate it from the rest of the system by plugging the hose from the DM-TL at the charcoal canister, then clear codes and run another test. See the following chart for test results.

Model	Scan Tool EVAP Test Sequence	Test Result	Test Result	Interpretation and Next Action
2000	Aborts after changeover valve cycles	P1448 Pending		Pass: Diagnose remainder of EVAP system
2000	Completes		Leak Code Sets: P0442 or P0455	Fail: Swap DMTL and retest
2001	Aborts after changeover valve cycles	P1448 Pending		Pass: Diagnose remainder of EVAP system
2001	Completes		Leak Code Sets: P0442 or P0455	Fail: Swap DMTL
2002	Aborts after changeover valve cycles	Communication error message		Pass: Diagnose remainder of EVAP system
2002	Completes		Abnormal test results message	Fail: Swap DMTL and retest

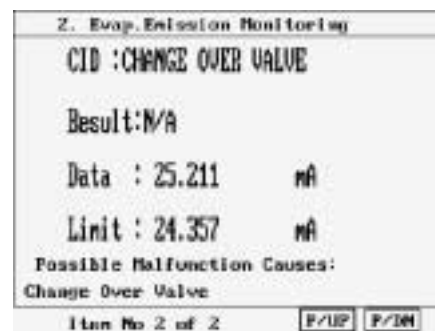
Remember that this system tests by monitoring the current draw of the DM-TL as the pressure in the fuel tank increases (See *Technician Times* Vol 2, Issue 4, page 10). When blocking off the hose from the DM-TL, the current ramps up so quickly (if there is no leakage) that the ECM aborts the test right after the changeover valve cycles.

The Monitoring Test Results in the Hi-Scan Pro also may be of some help when analyzing a test failure (see the following sample test result screens). Go to Monitoring Test Results, OBD Monitoring Test, Evap. Emission Monitoring. The line labeled Data is the measured current draw of the DM-TL during the test. The line labeled Limit is the reference current that set at the beginning of the test. If the data current is lower than the limit current, the system (in this case the DM-TL) has a leak. If the data current is higher than the limit current, then no leaks are present. Remember to clear any pending DTCs before releasing the vehicle.

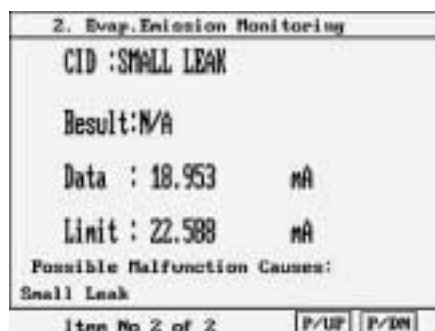
Large Leak Failure, Current Draw is Lower Than Limit



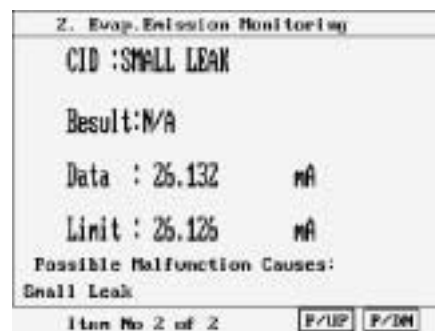
With DM-TL Hose Pinched, Current Draw is Higher Than Limit



Small Leak Failure, Current Draw is Lower Than Limit



Passed Test Result, Current Draw Reached Limit



Kia Vehicle After Airbag Deployment Inspection/Replacement

After a collision in which the airbags deploy, there are certain parts that require replacement and some that only require inspection to ensure their serviceability. Refer to the chart for specific inspection/replacement information.

WARNING

- Always wear safety glasses when handling airbag modules.
- Always wear rubber gloves when handling deployed or damaged airbag modules.
- Airbag surfaces may be contaminated with small amounts of Sodium Hydroxide (NaOH). Prevent contact of the airbag module with liquids, combustibles, and flammable materials. Immediately wash contaminated hands and skin areas with mild soap and water. Flush eyes with water if exposed to by-products. Failure to follow these instructions could result in chemical burns and personal injury.

Model	Drivers airbag	Pass. airbag	Knee airbag (1)	Side airbag driver/pass.	Side curtain (2)	Seat belt pre-tensioner	Side airbag sensors (3)	Frt sensors & harness (4)	ADU or SRSCM (5)	Clockspring, strg. wheel (6)	Airbag harness, inst. panel
Sephia '95-'96 (Multi-Point)	R	R	N/A	N/A	N/A	N/A	N/A	I	Clear	I	I
Sephia '96-'00 (Single-point)	R	R	N/A	N/A	N/A	N/A	N/A	N/A	Clear	I	I
Sephia '01 (Pre-tensioners)	R	R	N/A	N/A	N/A	R	N/A	N/A	Clear	I	I
Spectra '00 →	R	R	N/A	N/A	N/A	R	N/A	N/A	Clear	I	I
Sportage '96	R	R	N/A	N/A	N/A	N/A	N/A	N/A	R	I	I
Sportage '97 →	R	R	R	N/A	N/A	N/A	N/A	N/A	R	I	I
Rio	R	R	N/A	N/A	N/A	R	N/A	N/A	Clear	I	I
Optima	R	R	N/A	R	N/A	R	I	N/A	R	I	I
Sedona	R	R	N/A	N/A	N/A	R	N/A	N/A	R	I	I
Sorento	R	R	N/A	N/A	R	R	I	I	R	I	I

R=Replace I=Inspect Clear=Perform scan tool airbag clear function N/A=Not Applicable

1. The plastic knee airbag mounting screws must be replaced according to the Sportage Service Manual.
2. Inspect the headliner, pillar trim and related interior components after side curtain deployment and replace as required.
3. Inspect the side airbag sensors and airbag harness at the sill and B-Pillar area after side or curtain airbag deployment.
4. Inspect inside the front fenders and bumper for damage to the front sensors and airbag harness after frontal collision.
5. The Sephia/Spectra/Rio ADU will be in an "After Deployment Mode" and must be cleared. Clear the ADU by performing the scan tool airbag code clear function.
6. Carefully inspect the drivers airbag connector for melting and replace the clockspring if necessary.

* NOTICE

After replacing/inspecting parts, check for any airbag DTCs (if airbag indicator light stays on). Diagnose, inspect and repair in accordance with the appropriate Service Manual.

Please use this form to provide input for future issues of the Kia *Technician Times*.
Write your information below, remove page, then fax or fold and mail. Postage is prepaid.

Model: _____ Year: _____

Condition/Incident: _____

Solution/Repair/Suggestion*: _____

*If necessary, include a sketch and/or page reference for the applicable Service Manual or Electrical Troubleshooting Manual.

All information received by Kia Motors America (KMA), becomes the property of KMA. All respondents consent to allow KMA to publish their name and suggestions in the Kia *Technician Times*.

Your Name _____ Signature _____

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